

# RANGELAND GRASSHOPPER MORMON CRICKET SUPPRESSION PROGRAM -- IDAHO 2004

## SUMMARY OF GRASSHOPPER SURVEY RESULTS

With a few exceptions, most areas of Idaho did not experience heavy grasshopper infestations in 2004. Infestations were detected in Washington, Gem, Payette, Canyon and Ada Counties in Southwest Idaho; Gooding, and Cassia Counties in South Central Idaho; and Bear Lake County in Southeast Idaho. Surveys in Northern Idaho found infestations in Clearwater, Nez Perce and Idaho Counties.

The populations in Southwest Idaho are troubling because the history of major grasshopper outbreaks indicates that they begin in this area and spread eastward over the course of a few seasons. Additionally, several of the currently infested areas comprise Areas of Critical Environmental Concern managed by BLM and were excluded from treatments in 2004. These areas will be closely monitored in 2005.

Species composition consisted primarily of *Aulocara ellioti*, *Oedaleontus enigma*, *Camnula pellucida*, and *Melanoplus sanguinipes*. *Melanoplus bivittatus* and *M. packardii* were abundant in localized areas. The season should have allowed exceptional oviposition opportunities and there are currently no factors that would indicate any reason to expect major decreases in overall grasshopper populations in 2005.

## SIGNIFICANT 2004 RANGELAND GRASSHOPPER SURVEY RESULTS

County	Acres infested at more than 8 grasshoppers per sq. yd				
	BLM	NATIONAL FOREST	STATE LAND	PRIVATE LAND	TOTAL
Ada	9,000		1,000	10,000	20,000
Adams				1,000	1,000
Bear Lake				4,000	4,000
Blaine	1,000			2,500	3,500
Boise		1,000		1,000	2,000
Canyon	1,000			1,000	2,000
Cassia	5,000			2,000	7,000
Clearwater				1,000	1,000
Elmore	5,000	1,000	1,000	7,500	14,500
Gem	10,000		1,000	109,000	120,000
Gooding	1,000		600		1,600
Idaho		1,000		1,000	2,000
Lincoln	4,000			1,000	5,000
Minidoka	2,000			1,000	3,000
Nez Perce				1,000	1,000
Owyhee	15,000		1,000	1,000	17,000
Payette	25,000		2,000	48,000	75,000
Valley				1,000	1,000
Washington	25,000	5,000	2,000	68,000	100,000
<b>TOTAL</b>	<b>103,000</b>	<b>8,000</b>	<b>8,600</b>	<b>261,000</b>	<b>380,600</b>

## **SUMMARY OF MORMON CRICKET SURVEY RESULTS**

In Western Idaho the Mormon cricket outbreak which has been building in Owyhee County increased drastically in density and extent in 2004. We anticipate this large infestation has not yet reached its peak, although treatments may have reduced local elements of the outbreak. The infestation extends eastward about 40 miles from the Oregon border and southward about 70 miles from the Snake River.

There is also an infestation of Mormon crickets in Gooding, Camas, Elmore, Ada, Boise, Gem, Payette, and Washington Counties. Control activities in Elmore County during 2003 seem to have diminished populations in some areas, but the overall outbreak stretches about 125 miles from north of Gooding to the Snake River west of Cambridge, and the populations are increasing in the western part of the outbreak.

In Eastern Idaho another infestation is building in Oneida, Power and Bannock Counties. This infestation extends about 25 miles from the Utah state line to areas around McCammon and Rockland.

## **SIGNIFICANT 2004 MORMON CRICKET SURVEY RESULTS**

County      Acres infested at more than 3 Mormon crickets per sq. yd.

	<b>BLM</b>	<b>NATIONAL FOREST</b>	<b>STATE LAND</b>	<b>PRIVATE LAND</b>	<b>TOTAL</b>
Ada	10,000	1,000	9,000	55,000	75,000
Bannock	1,000	1,000	300	1,000	3,300
Boise	1,000	50,000	25,000	24,000	100,000
Camas	2,500		1,500	2,000	6,000
Elmore	150,000	25,000	25,000	100,000	300,000
Gem	8,000		2,000	10,000	20,000
Gooding	25,000		2,500	2,500	30,000
Oneida	2,000	640	640	3,000	6,280
Owyhee	1,450,000		100,000	100,000	1,650,000
Payette	1,000		1,000	1,000	3,000
Power	1,000	1,000	640	2,000	4,640
Valley		2,000			2,000
Washington	35,000	60,000	25,000	80,000	200,000
<b>TOTAL</b>	<b>1,686,500</b>	<b>140,640</b>	<b>192,580</b>	<b>380,500</b>	<b>2,400,220</b>

## **SUMMARY OF COMPLAINTS AND TREATMENTS**

Many members of the public, especially in Owyhee County and along the Boise and Danskin Fronts in Ada, Elmore, and Boise Counties voiced general complaints about Mormon crickets throughout the spring and summer.

There were also scattered complaints about grasshoppers and Mormon crickets from southeastern Idaho.

### FEDERALLY MANAGED LANDS

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine (PPQ) received a total of 93 official complaints about grasshoppers and Mormon crickets. PPQ conducted ten treatment projects on federal land in response to these complaints (some individual projects were in response to more than one complaint). All these treatments were on rangeland managed by Bureau of Land Management or National Forest Lands and consisted of application of 10 lbs/acre of 5% carbaryl bait. The bait was distributed by ground along roads and trails through infested rangeland in Ada, Boise, Elmore, Owyhee, Cassia, Oneida, Power and Bannock Counties and by air on infested rangelands in Elmore, Washington, Owyhee, and Gooding Counties. In no cases were strips more than 100 feet wide treated without intervening untreated spaces. Distance between swath centers of aerially applied bait ranged from 133 feet for grasshoppers to 500 feet for Mormon crickets. PPQ treated a total of 21,465 acres with 214,650 lbs of carbaryl 5% bait in Idaho in 2004.

#### Acres of Federally Managed Land Treated for Grasshoppers or Mormon Crickets in Idaho in 2004

Owyhee	13,525
Elmore	2,815
Gooding	2,520
Washington	2,190
Bannock and Power	175
Ada	175
Cassia	30
Boise	20
Oneida	15
Total	21,465

The other official complaints did not result in treatment by PPQ because:

Insects were on private land and not on federal land, or  
Environmental concerns precluded treatments, or  
Numbers of insects present did not justify treatment

Grasshopper populations on federally managed lands were generally light with only a few outbreaks. In areas where treatments were applied the bait was effective in reducing the populations after a few days to several weeks.

The Mormon cricket outbreak in Owyhee County necessitated a drawn out treatment campaign utilizing aircraft and ground equipment to disperse 135,250 lbs of bait on BLM managed lands. Also, unknown parties distributed additional bait along roads and trails in areas where Mormon cricket numbers may not have been diminished by PPQ's treatments. In areas where bait could be applied by air or ground the Mormon cricket populations were suppressed to levels that did not result in extensive crop loss or damage to natural resources.

### STATE AND PRIVATE LAND

**Idaho State Department of Agriculture (ISDA)** participated in cost-share treatment projects with private land managers and county agricultural agents to treat range and croplands in southern Idaho. These projects included:

**2004 – ISDA AERIAL APPLICATION COST SHARE PROJECTS FOR  
PRIVATE RANGELAND GH SUPPRESSION**

<b>Location</b>	<b>Number of landowners</b>	<b>Total Protected Acres*</b>	<b>Cost to ISDA**</b>	<b>Cost to Private Landowner</b>	<b>Total Project Costs</b>
Horseshoe Bend Boise and Ada counties	5 private & state lands	10,212	\$ 19,231	\$7,845	\$27,076
Tree Top Ranch Elmore County	1 private	1,600	\$8,566	\$4,296	\$12,862
Camas Prairie Camas County	5 private landowners & state lands	15,585	\$25,949	\$13,017	\$38,966
Cassia County	1 private landowner	1,415	\$4,717	\$2,358	\$7,075
Bear Lake County	14 private landowners	5,592	\$13,500	\$6,771	\$20,271
Elmore/Gooding Counties Federal and State lands cooperative project	Idaho Department of Lands	640	\$2,640		\$2,640
<b>Total ISDA Cost Share Acres</b>		<b>18,593</b>	<b>\$ 74,603</b>	<b>\$34,287</b>	<b>\$108,890</b>

\*A RAATS system was employed on most projects reducing total acres actual treated with insecticide.

\*\*The ISDA cost share program for 2004 paid 2/3 of the total treatment cost. The private land owners were responsible for the remaining 1/3.

Some treatments included utilization of diflubenzuron on grain and hay crops under special emergency exemption registration requested by impacted commodity organizations. ISDA forwarded the emergency exemption request to the Environmental Protection Agency which approved the special label for the 2004 season.

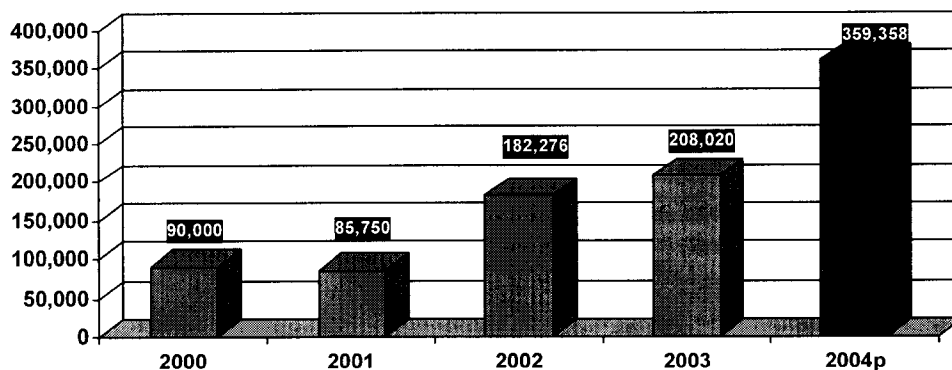
ISDA provided 5% carbaryl bait to agricultural landowners for application to their own land. A total of 400 Idaho landowners received bait for Mormon cricket suppression to protect private rangeland and cropland. The total value of the bait provided to Idaho landowners in 2004 was \$203,054.

**2004 - ISDA BAIT DISTRIBUTIONS FOR PRIVATE RANGELAND MC SUPPRESSION**

Rank	County	Carbaryl Bait Distributed (lbs)	Number of Distributions
1	Owyhee	154,794	185
2	Elmore	78,736	94
3	Oneida	32,400	62
4	Power	27,790	38
5	Ada	23,130	74
6	Bannock	13,300	16
7	Blaine	7,450	9
8	Boise	5,082	17
9	Bear Lake	4,200	10
10	Cassia	4,100	6
11	Washington	2,858	18
12	Others	3,548	14
Idaho	Total	359,388	543

**ISDA GH PROGRAM**

**POUNDS OF CARBARYL BAIT DISTRIBUTED TO PRIVATE LANDOWNERS 2000 -2004**



## **ISDA GRASSHOPPER/MORMON CRICKET PROGRAM - MAJOR COOPERATORS**

During the 2004 season the following cooperators provided significant help in bait distributions and overall program delivery:

- University of Idaho, Extension Service
- Seminis Seed Company, Nampa, ID
- Soranco Bean Products, Twin Falls, ID
- Owyhee County Sheriff's Department, Murphy, ID
- Ada County Weed and Pest Control District, Meridian, ID
- Boise County Road Department, Gardena, ID
- Washington County Weed Control District, Weiser, ID
- Cambridge Lumber Inc. Cambridge, ID
- Farmers Warehouse, Mountain Home, ID

## **SUMMARY OF ENVIRONMENTAL DECISIONMAKING**

The Environmental Impact Statement which informs decisions on the Rangeland Grasshopper Suppression in seventeen western states is available at:

<http://www.aphis.usda.gov/ppd/es/gh.html>

PPQ conducted scoping in November and December of 2003 and received approximately 80 responses from private citizens, organizations, and governmental units. The responses expressed concern about the damage that grasshoppers and Mormon crickets would cause if they were not controlled and concern about potential adverse effects of insecticides. PPQ considered all the comments and conducted four environmental assessments, one for Mormon crickets and three for grasshoppers. The Environmental Assessments which informed decisions about the 2004 program in Idaho are available at:

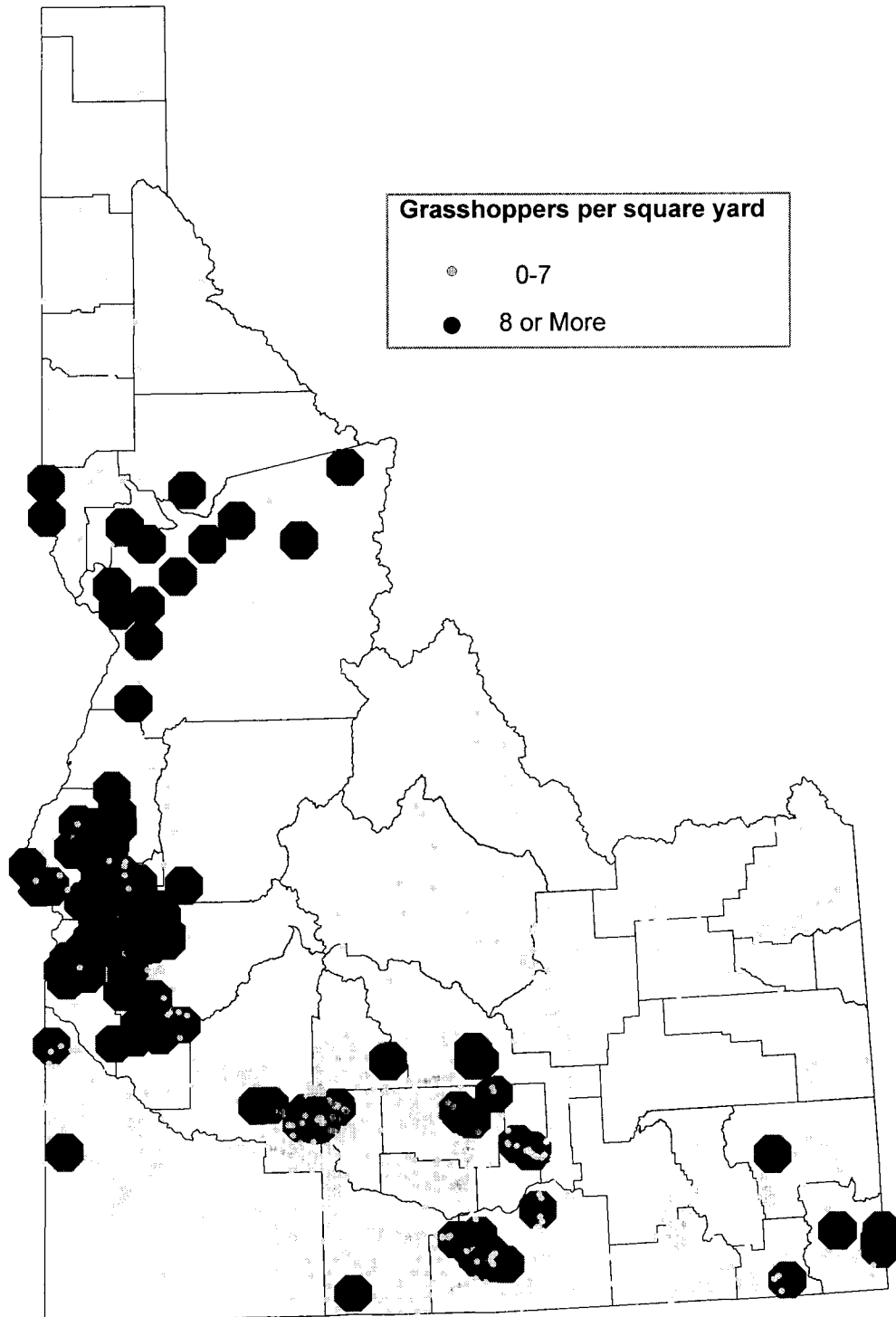
<http://www.agri.state.id.us/plants/GHTOC.htm>

In an attempt to appease the parties who expressed extreme concerns about the use of liquid sprays for control of grasshoppers and Mormon crickets on rangeland, PPQ analyzed only carbaryl bait for the Mormon cricket program. In normal outbreaks, carbaryl bait can be very effective in suppressing Mormon crickets. Because Mormon crickets are flightless, travel significant distances on the ground from the places where they hatch to the places where they may damage crops or other resources, and move in large bands which can be easily detected by the general public as well as trained scouts; they can be intercepted with bait treatments applied by air or ground.

Because grasshoppers can fly, may hatch in very close proximity to crops, and are not readily detected by many members of the public until they have reached maturity; PPQ analyzed malathion and diflubenzuron sprays as well as carbaryl bait for the grasshopper programs. When the grasshopper environmental assessments were published for public comment, three organizations filed notice of intent to sue for alleged violation of the Clean Water Act. In order to avoid a delay or total shut down of the program and the public expense of legal fees (including those of the plaintiffs) PPQ made a decision to utilize only carbaryl bait in the grasshopper suppression program as well.

Also in response to stakeholders, PPQ initiated a program which allows concerned parties to request federally managed rangeland near their homes be excluded from treatments for grasshoppers or Mormon crickets. This program was publicized through paid ads, and press releases. There were no applicants for the program.

## 2004 Grasshopper Survey Results



# 2004 Mormon cricket survey results

